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TRANSLATION

METHOD OF MEASURING THE TEMPERATURE FIELD
OF A STREAM OF EXHAUST GASES

By

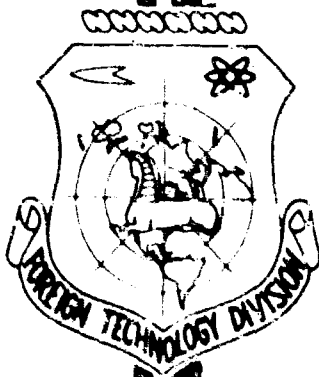
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AIR FORCE SYSTEMS COMMAND

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UNEDITED ROUGH DRAFT TRANSLATION

METHOD OF MEASURING THE TEMPERATURE FIELD
OF A STREAM OF EXHAUST GASES

BY: I. L. Frolovskiy

English pages: 2

SOURCE: Patent No. 169826 (Appl. No. 890881/26-10,
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METHOD OF MEASURING THE TEMPERATURE FIELD OF A STREAM OF EXHAUST GASES

I. L. Frolovskiy

Methods are known of measuring the temperature field of a stream of exhaust gases on the test stand of gas-turbine engines.

The proposed method is distinguished from the known ones by the fact that the measuring of the temperature field is done by setting the thermocouple not in the exhaust measuring devices but in the ring-shaped space between the engine and the exhaust system.

The undistorted temperature field to be measured in this section in no way differs from the temperature field in the operating system of the engine. The results of the measurements

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obtained are converted mathematically with the taking into account of the vortex of the gas stream.

The proposed method enables one to improve considerably the precision of the measurements and shorten the time spent on the test.

O b j e c t o f t h e I n v e n t i o n

A method of measuring the temperature field of a stream of exhaust gases, for example, on the test stand of gas turbine engines with the help of a thermocouple which has the d i s t i n g u i s h - i n g feature that for the purpose of improving the precision of the measurements and shortening the time spent on the test the thermocouple is set up between the engine and the exhaust system, the measuring of the temperature field is done in this section, and the results obtained are converted mathematically with the taking into account of the vortex in the gas stream.